A Profile of Student Learning:

Outcomes in Manitoba

AUGUST 2002

Manitoba
Education,
Training
and Youth

370.97127 A profile of student learning: outcomes in Manitoba

ISBN 0-7711-24554

1. Education—Manitoba. 2. Educational tests and measurements—Manitoba. 3. Education—Manitoba—Aims and objectives. 4. Educational tests and measurements. 5. Academic achievement—Manitoba. I. Manitoba. Manitoba Education, Training and Youth.

FOREWORD

The purpose of Manitoba's K-S4 education system is to equip students with the knowledge, skills and attitudes they need to live successful, satisfying and productive lives. In order to facilitate success for all students, Manitoba promotes and supports strong partnerships among students, parents, teachers, administrators, trustees, communities, educational organizations, and the Department of Education, Training and Youth.

Manitoba's *K-S4 Education Agenda for Student Success 2002-2006* focuses on improving learning outcomes for all students. As part of the Agenda, initiatives are being implemented across the province that will improve outcomes especially for less successful learners; strengthen links among schools, families and communities; strengthen school planning and reporting; improve learning opportunities for educators; strengthen pathways among secondary schools, post-secondary education and work; and, link policy and practice to research and evidence. The full Agenda can be referenced at http://www.edu.gov.mb.ca/ks4/agenda.

This is the first of an annual series of reports to the public on student outcomes in Manitoba. Each report will provide provincial data on a range of K-S4 student outcomes. It is hoped that these provincial annual reports will encourage discussion within and among families, schools and divisions, educator oganizations, communities and government, serving to assist everyone to work together to improve student success. Starting in 2002-2003, schools and school divisions will be releasing their own annual reports to their respective publics.

This first report presents the most reliable data currently available on the following student outcome measures:

- performance on international assessments (PISA)
- performance on national assessments (SAIP)
- performance on Manitoba assessments
- performance on high school courses
- grade promotion and retention
- high school completion.

This document concludes with a discussion on the need to be inclusive and equitable when examining outcomes so that all students benefit. Future reports will provide information on additional outcomes.

INTERPRETING THE DATA

This report is intended to provide information to Manitobans about a range of student outcomes in our schools. To help readers put the results within a context, the report includes a 'benchmark' statement at the beginning of each section.

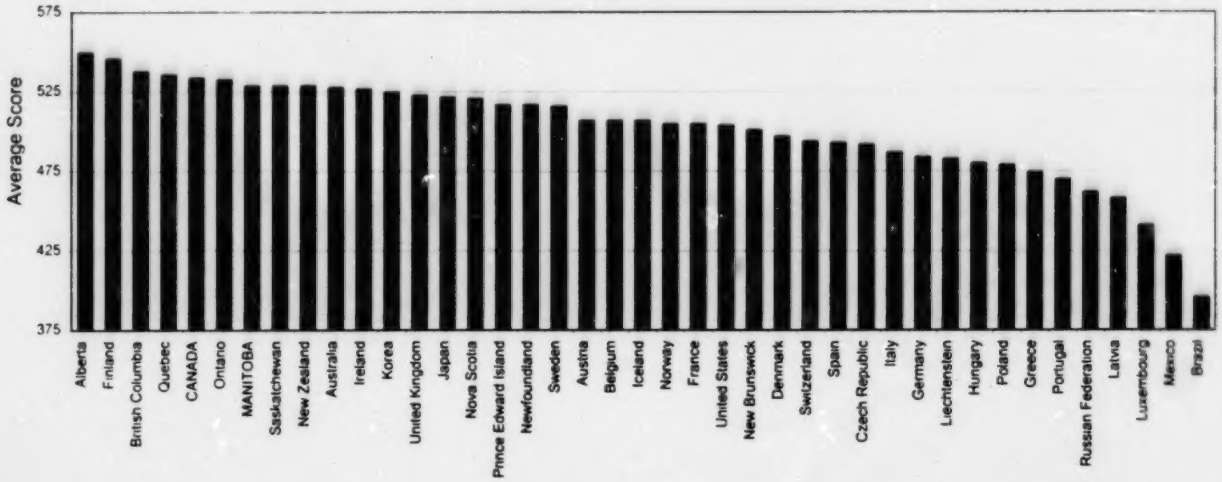
Taken as a whole, the data indicate that Canadian students do well by international standards, and Manitoba students perform at about Canadian average levels. At the same time, given the importance of education, we can and should be striving to improve our results and especially to increase the proportion of students who are performing at satisfactory or better levels.

Academic Achievement: Programme for International Student Assessment

Manitoba students perform at about the Canadian average and above the level of almost all other countries.

In Spring 2000, 2,599 Manitoba 15-year–old students participated in the Organization for Economic Cooperation and Development's (OECD) Programme for International Student Assessment (PISA) study on the performance of youth in reading, mathematics and science. In Canada, students were selected at random from randomly selected schools in each province. Manitoba students in the French Immersion program wrote the assessment in English. This study permits a comparison of the achievement of Manitoba students with that of students in other provinces and countries. The assessment focused mainly on reading with sub-test scores for retrieving information, interpreting and reflecting. Shorter mathematics and science tests were administered to sub-groups of students.

PISA 2000 READING—AVERAGE SCORES BY COUNTRY AND PROVINCE



Note: Refer to complete PISA document to obtain confidence interval for each country and Canadian province (Data Source section).

Overall, Canadian students ranked second in reading, sixth in mathematics and fifth in science among the 31 countries. Only Finnish students scored significantly better than Canadian students in reading, while in mathematics, Japanese and Korean students scored significantly better, and in science, Korean, Japanese and Finish students scored significantly better. In all three assessments, the average performance level for the 31 countries was well below that of Canada.

Manitoba students performed at a level very close to the Canadian average in all three subjects. In reading, only students from Alberta performed significantly better than Manitoba students, while in both mathematics and science only students from Quebec and Alberta performed significantly better.

Academic Achievement: Pan-Canadian School Achievement Indicators Program

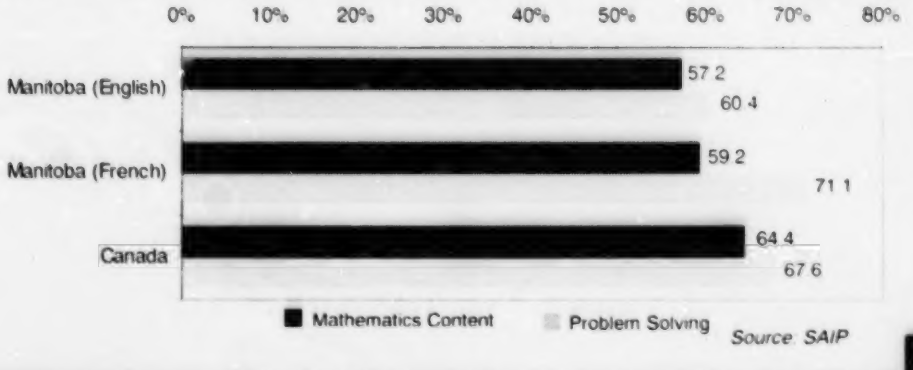
Manitoba students perform at about the Canadian average level in pan-Canadian assessment tests. However, in the most recent mathematics assessment, a significant number of students did not reach the desired level of performance.

The Council of Ministers of Education Canada initiated the School Achievement Indicators Program (SAIP) in 1989. Mathematics assessments were conducted in 1993, 1997 and 2001; reading and writing assessments in 1994 and 1998; and Science in 1996 and 1999.

In 2001, SAIP assessed two types of mathematics achievement, content and problem solving, among 13- and 16-year-old students from across Canada, with 2,845 Manitoba students participating in the content assessment, and 2,676 in the problem solving assessment. As with the PISA study, students were selected at random from randomly selected schools. Unlike the PISA study, however, French Immersion students wrote the assessment in the French language.

The achievement of Manitoba 13-year-olds in mathematics content in the English, French Immersion and Français programs was below the Canadian average, while in problem solving 13-year-old Manitoba students in the Français and French Immersion programs performed near the Canadian average.

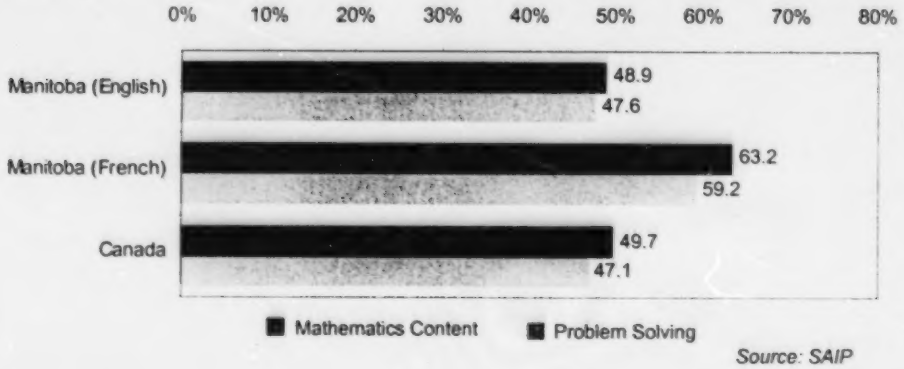
PERCENTAGE OF 13-YEAR-OLDS REACHING THE EXPECTED LEVEL IN MATHEMATICS (2001)



Source: SAIP

Among 16-year-olds, students in the French system performed at levels significantly better than Canada as a whole in mathematics content and problem solving, while 16-year-olds in the English system performed at near the Canadian average in both mathematics content and mathematics problem solving.

PERCENTAGE OF 16-YEAR-OLDS REACHING THE EXPECTED LEVEL IN MATHEMATICS (2001)



Source: SAIP

Provincial Assessments

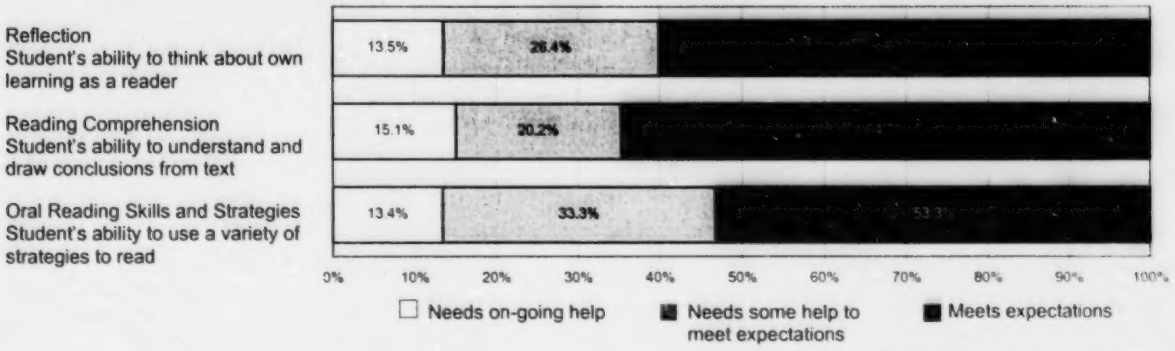
Student performance on Manitoba assessments in grades 3, 6, S1 and S4 indicate that the majority of students perform at an acceptable level, but there is room for improvement in a variety of subject and grade areas.

The academic achievement of students in Manitoba is assessed using a variety of methods, including provincially developed, curriculum-based standards tests for particular subject areas in grades 6, S1 and S4, and a classroom-based assessment at grade 3 in reading and numeracy.

- The Grade 3 Assessment gathers information on each student's critical knowledge and skill competencies in reading and numeracy. All students in grade 3 are expected to participate in the assessment. The primary purpose of the assessment is to provide information to parents regarding their child's basic skills in reading and numeracy at the beginning of Grade 3, and in reading in French for students in French Immersion at the beginning of Grade 4. For each competency, students were evaluated as either "needs on-going help", "needs some help to meet expectations", or "meets expectations".

  For example, within the reading component of the grade 3 assessment, it was found that the majority of grade 3 students in the English and French Immersion programs met expectations within all competency categories for reading in English. Reading comprehension was the strongest competency area. Results for reading in French and numeracy are presented in the complete report available on the Internet at http://www.edu.gov.mb.ca/ksr/assess/publications.

GRADE 3 READING—ENGLISH AND FRENCH IMMERSION PROGRAMS (2001–02 SCHOOL YEAR)

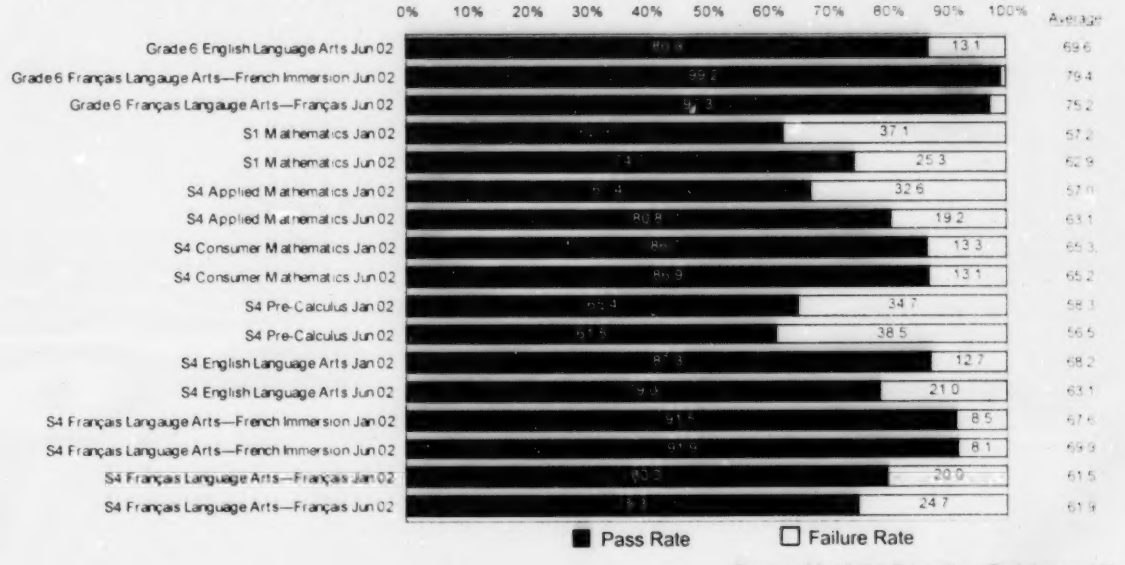


Source: Manitoba Education, Training and Youth

In numeracy, the majority of students met expectations in most competency categories. The strongest performance was in sorting objects, reading and interpreting graphs, and representing and comparing numbers. The weakest performance was in recalling addition and subtraction facts to 10, working with patterns, and solving addition and subtraction story problems.

- Standards tests for grade 6 language arts and S1 mathematics are optional for schools to implement. In S4, standards tests are mandatory for all students who are enrolled in language arts, applied mathematics, pre-calculus mathematics and consumer mathematics. All provincial assessment tests are centrally developed by expert teachers of the subject and pilot tested to ensure that test questions fairly represent intended learning outcomes. Standards tests in grade 6, S1 and S4 are administered and scored by local teachers.

RESULTS ON PROVINCIAL STANDARDS TESTS (2001–02 SCHOOL YEAR)



Source: Manitoba Education, Training and Youth

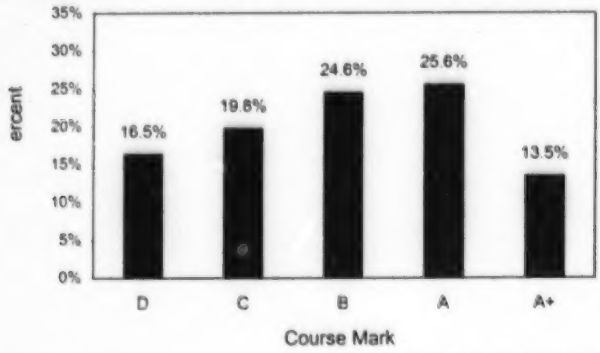
In general, students performed better in language arts courses than in mathematics courses.

Final Course Marks

The majority of students who pass a high school course obtain a good grade.

In Manitoba, students must successfully complete at least 28 courses over their high school career from S1 to S4. The final course marks awarded by their classroom teachers provide information on how students are performing academically across all subject areas. For this report, only the courses which students successfully passed by receiving a mark of 50% or higher are examined. Future reports will look at course failures.

DISTRIBUTION OF S1–S4 PASS MARKS (2000–01 SCHOOL YEAR)



Source: Manitoba Education, Training and Youth

In 2000–01, over 437,000 passing course marks were recorded for students in grades S1 through S4. For the purpose of this document, marks were grouped as: A+ = 90–100%, A = 80–89%, B = 70–79%, C = 60–69%, and D = 50–59%. Two-thirds of the course marks in 2000–01 were an A+, A or B.

This distribution of marks shows that when students pass their courses, they tend to do so with a good grade.

Student Promotion and Retention

There are no comparable national data on grade promotion and retention. Analysis of Manitoba data indicates that almost all students in each grade get promoted each year, but the cumulative effect over the eight elementary grades points to the possibility that one in every ten students may be retained in a grade at least once in their elementary schooling.

The progression of students through the elementary education system is an integral aspect to student achievement and educational outcomes. Each year, approximately 98% of students get promoted into their next grade of studies, with approximately 0.6% being promoted two grades. Annually, 1.4% of students repeat their grade.

PROMOTION AND RETENTION IN ELEMENTARY GRADES FROM GRADE 1 TO SENIOR 1 (2000–01 TO 2001–02)

Grades	Number of Students	% Promoted	% Promoted Two Grades	% Retained
1–2	14,674	96.6	0.5	3.0
2–3	14,398	98.0	0.4	1.6
3–4	14,547	98.4	0.5	1.1
4–5	14,979	98.9	0.3	0.8
5–6	14,901	99.1	0.4	0.6
6–7	14,812	98.9	0.4	0.7
7–8	14,533	96.8	1.5	1.7
8–Senior 1	14,319	97.7	0.5	1.8
Total	117,163	98.0	0.6	1.4

Source: Manitoba Education, Training and Youth

A higher proportion of students get retained in grade 1 than in any other elementary grade. Additionally, there is no clear promotion/retention pattern across the grades.

An extrapolation can be made from the data, which indicates the likelihood that 1 out of every 10 students who starts grade 1 will be retained at least once during their elementary career. This finding is supported by the findings reported in the March 2000 report *Student Transitions: Intentions of Manitoba Senior 4 Students*, where 10.3% of S4 students reported that they had repeated at least one grade.
http://www.edu.gov.mb.ca/researchreports/transitions/titlepage.htm

High School Completion

Canada has one of the highest rates of high school completion in the world. Manitoba's graduation rate is at par with the Canadian average and, like most other provinces, the Manitoba rate has remained fairly stable in recent years.

The completion of high school continues to be an important outcome for students. There are many ways that completion rates are reported. The most accurate way is to track individual students as they progress through their elementary-secondary grades. At this time, however, Manitoba does not have sufficient years of data to apply this methodology. In the absence of longitudinal data, statistical calculations and household survey findings are applied.

(a) On-time Graduation

A common method to examine high school completion is to look at the number of high school graduates as a percent of grade 9 enrolment four years previous. This method provides an estimate of the sequential flow of students from grade 9 (S1) through to finishing grade 12 (S4).

MANITOBA 'ON-TIME' HIGH SCHOOL GRADUATION RATES (1997 TO 2001)

Graduation Year	Total Graduates	S1 Enrolments 4 Years Before	Graduation Rate %
June 1997	11,741	15,471	75.9
June 1998	11,782	15,328	76.9
June 1999	11,599	15,839	73.2
June 2000	12,143	16,024	75.8
June 2001	12,282	16,243	75.6

Data excludes students from School for the Deaf, and Federally-sponsored Band schools.
Source: Manitoba Education, Training and Youth

Over the past number of years, Manitoba's annual high school graduation rate has remained fairly stable at around 76%. This rate is at par with annual Canadian graduation rates reported in *Education Indicators in Canada, Report of the Pan-Canadian Education Indicators Program 1999*, Statistics Canada.

(b) Graduation by Age 20

Although the majority of high school graduates complete high school within four years (i.e., they are either 17 or 18 years of age at time of graduation), there is a growing number of students each year who are graduating at older ages. This indicates that many students are taking longer than the traditional four years to complete their high school.

HIGH SCHOOL COMPLETION BY AGE 20 (1999)

	Total	Males	Females
Manitoba	85%	84%	86%
Canada	88%	85%	91%

Source: 2000 Youth in Transition Survey

Survey data collected by Statistics Canada found that by the time students reach 20 years of age, a much higher proportion of them have been able to complete high school. In 1999, the Manitoba completion rate for 20-year-olds was 85%.

In both Canada and Manitoba, it was found that women are more likely to complete high school than men. Women in Manitoba, however, demonstrated a lower incidence of completion than women nationally. Manitoba's 1999 overall completion rate of 85% was the third lowest in Canada, being behind only Prince Edward Island and Quebec.

BENEFITS FOR ALL

Inequities in student achievement exist across our education system, whether they be related to geographic location, ethnicity, disability or gender. Both PISA and SAIP have found statistically significant differences in achievement by gender and socio-economic background. Manitoba data shows that students in northern areas of the province do not perform as well as students from southern Manitoba. It is further known that Aboriginal students and students who require special assistance are less likely to achieve high levels of performance.

http://www.sourceoecd.org. The Canadian report, *Measuring Up: The Performance of Canada's Youth in Reading, Mathematics and Science*, is available electronically without charge at http://www.pisa.gc.ca, at http://www.statcan.ca and at http://www.cmec.ca.

SAIP – The SAIP document, *Report on Mathematics Assessment III*, and an additional report, *Mathematics Learning: The Canadian Context, 2001*, are available on line from the Council of Ministers of Education Canada at http://www.cmec.ca/.

Manitoba Grade 3 Assessment – For a full discussion of grade 3 Assessment results, see *Provincial Report (2001–2002) Grade 3 Assessment in Reading, Lecture and Numeracy/ Notions de calcul and Grade 4 Assessment in French Immersion Lecture* available on the web at http:www.edu.gov.mb.ca/ks4/assess/publications.html.

High School Completion – The *Youth in Transitions Survey* and *School Leavers Surveys* can be found on Statistics Canada's website: http://www.statcan.ca, while the Department's 1999 survey of high school graduates is located at http://www.edu.gov.mb.ca/ks4, and the Pan-Canadian Education Indicators Program (PCEIP) at http://www.cmec.ca or http://www.stat.ca.